

NOT MEASUREMENT
SENSITIVE

MIL-STD-129N
15 MAY 1997
SUPERSEDING
MIL-STD-129M
15 JUNE 1993

DEPARTMENT OF DEFENSE

STANDARD PRACTICE FOR MILITARY MARKING



AMSC N/A

AREA PACK

FOREWORD

1. The applicability of this military standard has changed. This standard is to be cited only for marking of military supplies which are intended for storage and shipment within the military distribution system, i.e., for marking of materiel not intended for immediate use, that is stored and/or moved within or between DoD facilities.

2. This military standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).

3. This standard incorporates many changes which have resulted from acquisition reform initiatives within DoD. The most significant changes are:

a. Limiting the application of this document to military marking only. Marking requirements applicable to commercial packaging are contained in ASTM D 3951.

b. Elimination of approximately 262 pages.

c. Military and federal specifications and standards have been replaced with non-Government standards wherever possible.

d. In keeping with the wording and requirements of MIL-STD-2073-1C, traditional level of protection marking no longer applies. MIL-STD-2073-1C does not provide for different levels of military preservation, there is now only one, which provides military unit protection to an item. There are two levels of military packing, A and B. The identification of military preservation will now be limited to the use of the method of military preservation from MIL-STD-2073-1C and the date the unit preservation was applied. Intermediate and exterior containers will be marked with the same information as unit packs, with no reference to the exterior level of pack.

4. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Chief, Logistics Support Activity Packaging, Storage, and Containerization Center, ATTN: AMXLS-TP-P, 11 Hap Arnold Boulevard, Tobyhanna, PA 18466-5097, by using the self-addressed DD Form 1426 (Standardization Document Improvement Proposal) appearing at the end of this document or by letter.



NOTICE!!

**READ FOREWORD BEFORE PROCEEDING
WITH DOCUMENT**

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1. SCOPE

1.1 Purpose. This standard provides the minimum requirements for uniform military marking and procedures for their application. The purpose of this standard has changed. It is intended for use only for the application of military specific markings to items intended for transportation and storage within the military distribution system, i.e., for marking of materiel not intended for immediate use, that is stored and/or moved within or between DoD facilities. Markings for commercial packaging are discussed in ASTM D 3951.

1.2 Applicability. The marking of all supplies, equipment, and ammunition shall be as specified in this standard. As defined in ASTM D 996, marking is "the application of numbers, letters, labels, tags, symbols, or colors to provide identification and to expedite handling during shipment and storage."

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, and 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they meet all specified requirements documents cited in sections 3, 4, and 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbook form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS MILITARY

MIL-C-46168	- Coating, Aliphatic Polyurethane, Chemical Agent Resistant
MIL-P-52905	- Paint, Camouflage, Removable
MIL-C-53039	- Coating, Aliphatic Polyurethane, Single Component, Chemical Agent Resistant

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STANDARDS
FEDERAL

FED-STD-595 - Colors Used in Government Procurement

MILITARY

MIL-STD-1168 - Lot Numbering of Ammunition
MIL-STD-2073-1C - Standard Practice for Military Packaging

HANDBOOK

MILITARY

MIL-HDBK-129 - Military Marking

(Unless otherwise indicated, copies of military specifications, standards, and handbooks are available by mail from the Defense Automated Printing Service, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents and publications . The following other Government documents and publications form a part of this document to the extent specified herein. Unless otherwise specified, issues are those cited in the solicitation.

CODE OF FEDERAL REGULATIONS (CFR)

Title 10 CFR - Energy
Title 29 CFR - Labor
Title 40 CFR - Protection of Environment
Title 49 CFR - Transportation

DEFENSE FEDERAL ACQUISITION REGULATION (DFAR) SUPPLEMENT

(Application for copies should be addressed to Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

JOINT MILITARY

AFJMAN 24-204/TM 38-250/ - Preparing Hazardous Materials
NAVSUP PUB 505/MCO for Military Air Shipments
P4030.19/DLAM 4145.3

DLAD 4145.41/AR 700-143/ - Packaging of Hazardous
AFJI 24-201/NAVSUPINST Materials
4030.55A/MCO 4030.40A

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DoD REGULATIONS, MANUALS, AND HANDBOOKS

DoD 4000.25-1-M - MILSTRIP
DoD 4500.32-R - MILSTAMP

(Joint military publications and DoD regulations and manuals listed above should be requisitioned through the applicable Service/Agency publications distribution office. Non-DoD activities can obtain copies of the publications from the Defense Logistics Agency, ATTN: DLA-XPD, 8725 John J. Kingman Road, Fort Belvoir, VA 22060-6221.)

NORTH ATLANTIC TREATY ORGANIZATION (NATO)

STANAG 4281 - NATO Standard Marking for Shipment and Storage

STANAG 4329 - Standard Bar Code Symbology

AMERICAN, BRITISH, CANADIAN, AND AUSTRALIAN (ABCA)

QSTAG 1152 - Bar Code Symbology
QSTAG 1154 - Standard Marking for Shipment and Storage

(Copies of Standardization Agreements (STANAGs) and Quadripartite Standardization Agreements (QSTAGs) are available by mail from the Defense Automated Printing Service, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Non-Government publications . The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation.

AUTOMATIC IDENTIFICATION MANUFACTURERS (AIM)

AIM BC 1 - Uniform Symbology Specification Code 39
(DoD Adopted)

(Application for AIM copies should be addressed to AIM USA, 634 Alpha Drive, Pittsburgh, PA 15238-2802.)

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM D 996 - Standard Terminology of Packaging and Distribution Environments (DoD Adopted)
- ASTM D 3951 - Standard Practice for Commercial Packaging (DoD Adopted)
- ASTM D 5445 - Standard Practice for Pictorial Markings for Handling of Goods (DoD Adopted)

(Application for ASTM copies should be addressed to ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

Dangerous Goods Regulations

(Application for copies should be addressed to International Air Transport Association, 2000 Peel Street, Montreal, Quebec, Canada H3A 2R4.)

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

Technical Instructions for the Safe Transportation of Dangerous Goods by Air

(Application for copies should be addressed to International Regulations Publishing and Distributing Organization, P.O. Box 60105, Chicago, IL 60660.)

INTERNATIONAL MARITIME ORGANIZATION (IMO)

International Maritime Dangerous Goods (IMDG) Code

(Application for copies should be addressed to International Maritime Organization, 4 Albert Embankment, London SE1 7SR, England.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.4 Order of precedence . In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS

General definitions may be found in ASTM D 996, MIL-HDBK-129, and other referenced documents. Hazardous materials definitions are listed in Title 49 CFR, Parts 171 and 173, and in other related publications.

4. GENERAL REQUIREMENTS

4.1 Abbreviations . Authorized abbreviations shall be those listed in the applicable service implementing directives. The correct unit of issue (UI) for marking is the UI shown in the procurement contract or order. Periods shall not be used with abbreviations.

4.2 Unit pack, intermediate container, and exterior container identification and contract data markings . Figure 1 shows the content and approximate placement of the identification markings on unit packs and intermediate containers, and identification and contract data markings on exterior containers. Unless specifically exempted in the procurement contract or order, these markings shall be applied to all contractor- or vendor-originated shipments. The terms "identification markings" and "contract data markings" shall be used throughout the text of this standard. The exact placement of identification and contract data markings on specific containers may vary slightly from those shown in the figures.

4.2.1 Identification markings on unit packs, intermediate containers, and unpacked items . The following minimum identification information shall be marked on all unit packs, intermediate containers, and unpacked items in the order listed. This requirement applies to all unit packs and intermediate containers repacked for shipment by military installations. Any additional identification markings required by the contract shall be placed either below these markings or in a conspicuous location on the identification-marked side of the container. Unit packs used as exterior containers at the time of packaging shall be marked in accordance with 4.2.2. Hazardous items shall be marked with identification markings as specified herein and in 5.4.

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- a. NSN/NATO stock number (to include spaces or dashes and any prefix or suffix shown in the contract or requisition), in-the-clear and bar coded. If no NSN is assigned, then this line may be omitted. For ammunition, when a DoD Identification Code (DoDIC) is specified, it shall be placed on the same line as the NSN/NATO stock number.
- b. Part number (PN). The part number cited in the contract shall be shown (except for ammunition items with NSN/DoDIC designations). If the item has no PN assigned to it or if no PN is required, then nothing is shown.
- c. Quantity and UI. A nondefinitive UI shall be accompanied by a quantitative expression such as "1 RO (100 FT)."
- d. Contract number or purchase order number including four-digit delivery order or call number.
- e. Military method and date of unit preservation (e.g., "M41-4/97" - method 41, from MIL-STD-2073, was provided in April 1997). Use of the letter M in the first position indicates that the pack is a military preservation method; "41" is the method number; "4/97" indicates the date of preservation.
- f. Serial number, when required.
- g. The following additional marking instructions shall be used for packaged ammunition with DoDICs (if aligned) and lot numbers, in accordance with MIL-STD-1168.

(1) The ends of each box shall be marked with the DoDIC and lot number. The word "LOT" will not be marked on the box ends.

(2) The lot number shall be marked on the lower portion of the identification-marked side with the word "LOT", and the lot number will be underlined with a 1/8 inch solid line.

NOTE: When lot numbering in accordance with MIL-STD-1168 is specified, the contract number and date of preservation (see 4.2.1d and e) are not required to be marked.

4.2.1.1 Placement of identification markings on unit packs, intermediate containers, and unpacked items (see figure 1). Markings on unit packs, intermediate containers, and unpacked items shall be so located as to allow the markings to be easily read and to ensure that the markings will not be destroyed when

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the pack or container is opened for inspection or until its contents have been used. The marking surface of a unit pack shall be the outermost wrap, bag, or container of the unit pack. When a barrier bag is used within another unit container, both the bag and the outermost container must be marked.

4.2.2 Identification markings on exterior containers (see figure 1). The following minimum identification information shall be marked on exterior containers in the order listed. The identification markings shall be applied to the upper left two-thirds of the side of the container having the greatest overall, usable marking surface. Additional identification markings that are required by the contract shall be placed either below these markings or in a conspicuous location on the identification-marked side of the container.

- a. NSN/NATO stock number (see 4.2.1a).
- b. PN (see 4.2.1b).
- c. Quantity and UI (see 4.2.1c).
- d. Military method and date of unit preservation (e.g., "M41-4/97" - method 41, from MIL-STD-2073, was provided in April 1997). Use of the letter M in the first position indicates that the inside pack has a military method of preservation; "41" is the method number; "4/97" indicates the date of preservation.
- e. Gross weight (see 4.2.2.3).
- f. Serial number(s), when required.

NOTES: 1. The inspect/test date and other shelf-life markings, when required, shall be applied below the identification markings and as specified in 5.2.1.

2. Boxes and crates 10 cubic feet and over shall have identification markings placed on the end of the container to the left of the identification-marked side.

4.2.2.1 Exterior container contract data markings (see figure 1). Contract data markings shall include the contract or purchase order number and delivery order or call number, modification for change order number (when used), and lot number (when used). Additional information may be required by the procurement contract or order. When more than one contract is applicable to a multipack, contract data markings are not required on the exterior container but shall be applied to each

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container in the multipack. Contract data markings shall be placed below the identification markings on the various exterior containers and unpacked items.

a. Unless specifically required by a military Service or Agency directive, contract data markings are not required on exterior containers when items are repacked for shipment by military installations.

b. For Defense Personnel Support Center (DPSC) Clothing and Textile (C&T) items only, the use of labels is prohibited. The following additional markings are required: shipment number; lot number; and container number. The container number shall be consecutively numbered from each shipping point for the duration of the contract. For multiple container shipments of C&T items, the packing list shall be placed inside the last container to be loaded for each shipment. The words "PACKING LIST HERE" shall be stenciled on the container.

NOTE: When lot numbering in accordance with MIL-STD-1168 is specified, the contract number is not required to be marked.

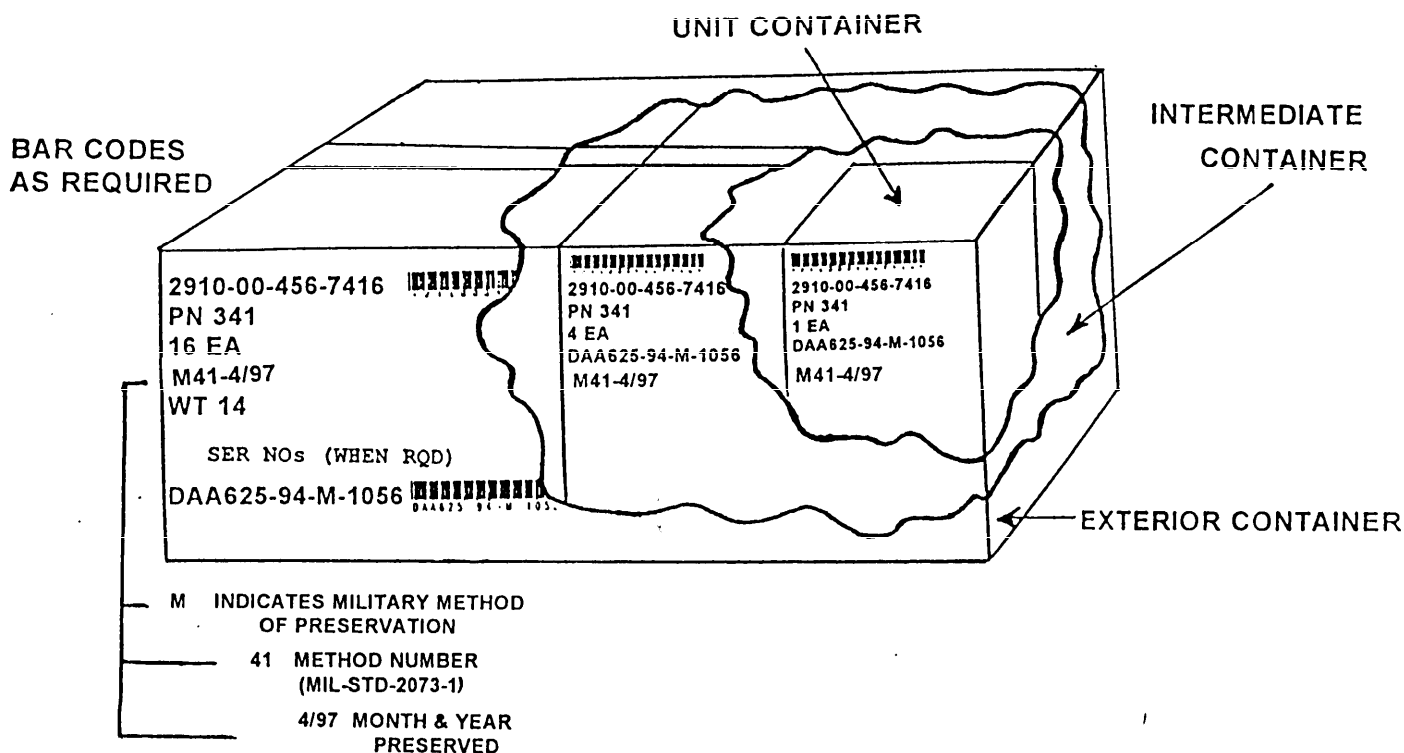


FIGURE 1. Unit pack and intermediate container IDENT markings and exterior container IDENT and CONTR markings (including bar code markings).

4.2.2.2 Marking for assorted items .

4.2.2.2.1 Related items . When an assortment of related items, which cannot be identified under one stock number but which support a specific weapon system or end item, is packed in a shipping container, a brief description of the contents shall be applied in lieu of the entire identification data (e.g., spare parts to NSN XXXX).

4.2.2.2.2 Unrelated items . When containers of unrelated items comprised of mixed NSNs which do not support a specific weapon system or end item are consolidated into a shipping container, in lieu of the identification markings required by 4.2.2, the shipping container shall be marked with the following information in the order listed: the word "MULTIPACK" (line 1) and the gross weight (line 2). Hand printing on multipacks is permitted.

Example: MULTIPACK
 WT 100

- NOTES: 1. In addition to any shelf-life markings, the words "CONTAINS SHELF-LIFE ITEMS" shall be placed below the identification markings on multipacks containing shelf-life materiel.
2. For information on the markings of multipacks that contain hazardous materials, see 5.4.2.

4.2.2.3 Marking of gross weight (see figure 1) . The capital letters "WT" shall precede the gross weight. The gross weight will be expressed in pounds rounded up to the nearest pound.

4.2.2.4 Placement of identification, contract data, and address markings on exterior shipping containers . The required identification, contract data, and address markings shall be placed on the identification-marked side of exterior shipping containers. The exact location of these markings may vary slightly. MIL-HDBK-129 provides specific guidance and illustrations for the placement of these markings on various containers. If a container is too small to accommodate the address markings on the identification-marked side, the address markings/label shall be applied on the opposite side or attached to a paper shipping tag (see 5.1.3) or marking board/panel (see 5.1.8). The required markings shall not be obscured by cleats, strapping, or closure tape. Unless otherwise specified in the procurement contract or order or when required by the carrier, such as parcel post, one end and the top and bottom of every container shall be free of markings. Marking materials used

shall meet the requirements specified in section 5. Unless otherwise specified by the cognizant activity, the size of the lettering on exterior containers shall be proportionate with the overall size of the exterior container or shall be proportionate to the available marking space.

4.2.3 Bar code markings (see figure 1). Bar code markings are required on all containers and loose or unpacked items. The bar code density shall be from 3.0 to 9.4 characters per inch (CPI). The bar code symbology shall comply with AIM BC 1. The national stock number (NSN)/NATO stock number shall be bar coded on all unit packs and intermediate containers. The exterior container shall be bar coded with the NSN/NATO stock number and the contract or purchase order number (including the call number) applied. Bar code symbols on exterior containers shall be located adjacent to the identification or contract data markings (either to the right of or directly below). For boxes and crates 10 cubic feet and over, bar code markings are required on one end of the container as well as the identification marked side. Bar coded serial numbers, when required, shall be placed directly below item identification or contract data markings on all containers. Information and illustrations on bar code markings are contained herein and in MIL-HDBK-129.

4.2.3.1 Bar codes for ammunition items. Bar code symbology shall be as specified in 4.2.3. The data to be encoded shall include the National Item Identification Number (NIIN), lot number, and quantity. The NIIN shall be encoded without dashes. The lot number shall include the dashes.

4.3 Address markings. Contractor- or vendor-originated address markings and military address markings shall be accomplished and applied as specified herein.

4.3.1 Contractor- or vendor-originated address markings (see figure 2). A contractor or vendor making a shipment will apply address markings to conform to the requirements of this standard. While it is preferred that contractors and vendors use the latest edition of the DD Form 1387 when shipping cargo to a continental United States (CONUS) (domestic) location, mandatory use of the label is not required. Fleet Post Office (FPO) and Air Post Office (APO) addresses also do not require usage of the DD Form 1387 address label. In addition, contractors and vendors are not required to bar code the DD Form 1387 or the domestic address label for deliveries to CONUS locations. However, when contractor- or vendor-originated shipments are destined for

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outside continental United States (OCONUS) (overseas) locations, and are shipped through the Defense Transportation System (DTS) (transshipment), they shall comply with the address marking instructions in DoD 4500.32-R, Volume I, which requires the address markings to be placed on a bar coded DD Form 1387. For these shipments, bar code labels may be affixed to the DD Form 1387 as an alternative to direct bar coding of the DD Form 1387. Destinations such as Hawaii, Alaska, Puerto Rico, Canada, and Mexico are considered OCONUS sites and require bar coded DD Form 1387 address labels. The military shipment label shall be completed as specified in 4.3.2 and 4.3.2.1. The domestic shipment address for contractor- or vendor-originated shipments shall contain the following minimum information in the order listed.

- a. Control Number or Reference Number: Enter the 17 character (alphanumeric) Transportation Control Number (TCN) for shipments entering the DTS, as applicable. For consolidated shipments, a lead TCN must be used. For some shipments, marking the contract number (C/N), purchase order number P/O), or Government Bill of Lading (B/L) number may be required by the contract.
- b. From: Name and address of consignor (DoD activity address code (DoDAAC) and in-the-clear address, if applicable).
- c. To: Name and address of the consignee (DoDAAC and in-the-clear address, if applicable).
- d. Project Code and required delivery date (RDD), when required. The RDD is the day of the year (e.g., 087, 198, etc.) specified on the requisition when materiel is required by the requisitioner or consignee. If the RDD is not appropriate, enter "000."
- e. Gross Weight and Cube (this piece). Weight will be expressed as in paragraph 4.2.2.3. The resulting cube shall be shown in cubic feet and shall be expressed in decimals rounded up to the nearest tenth of a cubic foot.
- f. Piece Number and Total Pieces.
- g. Additional data, when required by the procuring agency.

4.3.2 Military address markings . The DD Form 1387 shall be used as the address marking on all shipments of DoD cargo originated by DoD shipping activities. It shall be completed as specified in DoD 4500.32-R, Volume I. Hand printing is not authorized on the DD Form 1387 except for blocks 2, 6, 10, 12, 13, 14, and 17. MIL-HDBK-129 provides an illustration and guidance on completing the DD Form 1387.

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TCN W6262Q50980209XXX
B/L #C2718722
FM NOVO METAL CO
MOSCOW, PA 18444-3297
TO TRANSPORTATION OFFICER
W25G1W TOBYHANNA ARMY DEPOT
ATTN: AMXLS-ST
TOBYHANNA, PA 18466-5096
PROJECT CODE ABC
RDD 300
WT 70 CU 5.3
BOX 1 OF 2

FIGURE 2. Example of a domestic address label for a contractor- or vendor-originated shipment.

4.3.2.1 Data to be bar coded on the DD Form 1387. DoD sites shall bar code the TCN, ultimate consignee (DoDAAC), and piece number on the DD Form 1387, in accordance with DoD 4500.32-R, Volume 1. Contractor- or vendor-originated shipments, destined for OCONUS locations, that enter the DTS, shall have the same data bar coded on the DD Form 1387.

4.3.3 Affixing the contractor/vendor or military address label to the shipping container. When the surface of the shipping container or the surface of a material such as pipe, steel, or wood does not lend itself to direct application of the address label, the label shall be attached to a paper shipping tag (see 5.1.3) or a marking board or marking panel (see 5.1.8).

4.3.4 DoD shipments sent through the U.S. Postal Service and commercial parcel services (Fed-Ex/RPS). Shipments originated by DoD activities and sent through the U.S. Postal Service and by commercial parcel services must comply with the U.S. Postal Service domestic mail and commercial carrier requirements.

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4.3.5 Full carload and full truckload shipments . Full carload and full truckload shipments moving from a single consignor to a single consignee require at least one completed address label attached to the container or palletized load located closest to the door. Additional address labels may be placed on other containers or palletized unit loads in the shipment.

4.3.6 Less than carload and less than truckload shipments . A domestic address label or a DD Form 1387 shall be placed on all shipping containers, palletized unit loads, and unpacked items for less than carload and less than truckload lots.

4.4 Foreign Military Sales (FMS) marking requirements . Identification, contract data, address, and bar code markings, when required, for unit packs, intermediate and exterior containers, and for unpacked items shall be applied as specified in 4.2.1, 4.2.1.1, 4.2.2, 4.2.2.1, and 4.2.3. Bar coded container markings for FMS shipments are required only when requested by the customer country. Bar coding of the DD Form 1387 for FMS materiel being shipped through the DTS is always required. Additional guidance can be found in MIL-HDBK-129. In addition, the following special requirements shall apply to FMS shipments.

4.4.1 Minimum package size . The minimum size box used for FMS shipments shall have enough surface area on the top and two sides to affix all required labels, packing lists, DD Forms 250 (Material Inspection and Receiving Report), DD Forms 1348-1A, and any other required markings without overstepping or overlapping. Bar codes shall be legible and readable. Nothing shall be placed or appear on the ends or bottom of the box, package, or container. A packing list is required.

4.4.2 Multipacks . All boxes containing multiple items (related or unrelated) shall be marked as multipacks as specified in 4.2.2.2.2.

4.4.3 Contractor-originated shipments . The DD Form 250 shall be used as a packing list for contractor-originated FMS shipments in lieu of the DD Form 1348-1/DD Form 1348-1A, which may be used for FMS shipments originated by DoD activities. The DD Form 250 shall be prepared as specified in the Defense Federal Acquisition Regulation (DFAR) DoD Supplement, Appendix F, Part 3, F301, Preparation Instructions. Distribution of the DD Form 250 shall be made in accordance with the DFAR DoD Supplement, Appendix F, Part 4, and any other specific information contained in the procurement contract. For additional information on the DD Form 250, see 5.3.1.1.

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4.4.4 Shipments originated by DoD activities . When a DD Form 1348-1/DD Form 1348-1A is used in FMS, a copy of the form used shall be placed inside the container, and a copy of the same form shall be affixed to the exterior of the container for each item that is inside the container. Except for sensitive and/or classified items, there are no exceptions to this requirement. Automated Packing Lists (APL) are optional and, when used, they are in addition to the DD Form 1348-1/DD Form 1348-1A. Distribution of the forms shall be accomplished as shown in figure 3. It should be noted that one copy of the DD Form 1348-1/DD Form 1348-1A shall be forwarded (annotated with either the Government Bill of Lading or the Commercial Bill of Lading number) to the address of the appropriate freight forwarder indicated by the Type of Address Code (TAC) obtained from the Military Assistance Program Address Directory (MAPAD). Distribution of these forms is authorized by chapters 5 and 6 of DoD 4000.25-1-M, which also authorizes reprinting of additional copies of the DD Form 1348-1/DD Form 1348-1A.

4.5 Shipments to North Atlantic Treaty Organization (NATO) countries . Shipments to NATO countries shall be marked as specified herein and in Standardization Agreement (STANAG) 4281 for the marking of military cargo.

5. DETAILED REQUIREMENTS

5.1 Markings and marking materials .

5.1.1 Marking materials . Marking materials used shall be those materials specified in this standard or alternate choices approved by the cognizant activity. Contractors may obtain the DoD-unique labels discussed herein from commercial sources after obtaining samples from either the procuring activity or the local Defense Contract Management Command (DCMC) office.

5.1.1.1 Waterproofing materials used as protective coatings . Waterproofing materials such as spar varnish, acrylic coating compound, sealing compound, label adhesive, polyurethane coatings, and pressure-sensitive tape, that does not restrict or preclude legibility or readability of the package markings, shall be used as protective coatings on container markings.

5.1.1.2 Stencil-marking material . Any opaque, nonfading, fast drying, weather resistant stencil ink, lacquer, paint, or enamel shall be used for stencil marking. When applied directly to the item, removable paint that is used for marking unboxed/uncrated equipment, conforming to MIL-P-52905, shall be used. A MIL-C-46168 or MIL-C-53039 coating shall be applied when

stenciling containers that have had a top coat of chemical agent resistant coating (CARC) applied to them.

5.1.1.3 Obliterating lacquer, enamel, or paint. Any quick-drying, opaque lacquer, ink, enamel, or paint that approximates the color of the container shall be used for the obliteration of markings. When obliterating CARC painted markings on metal reusable containers, paint conforming to MIL-C-46168 or MIL-C-53039, paint chip color Green-383 or Tan-686 of FED-STD-595, shall be used. Green shall be used on green or green camouflage and tan shall be used on tan or desert sand camouflage colored containers.

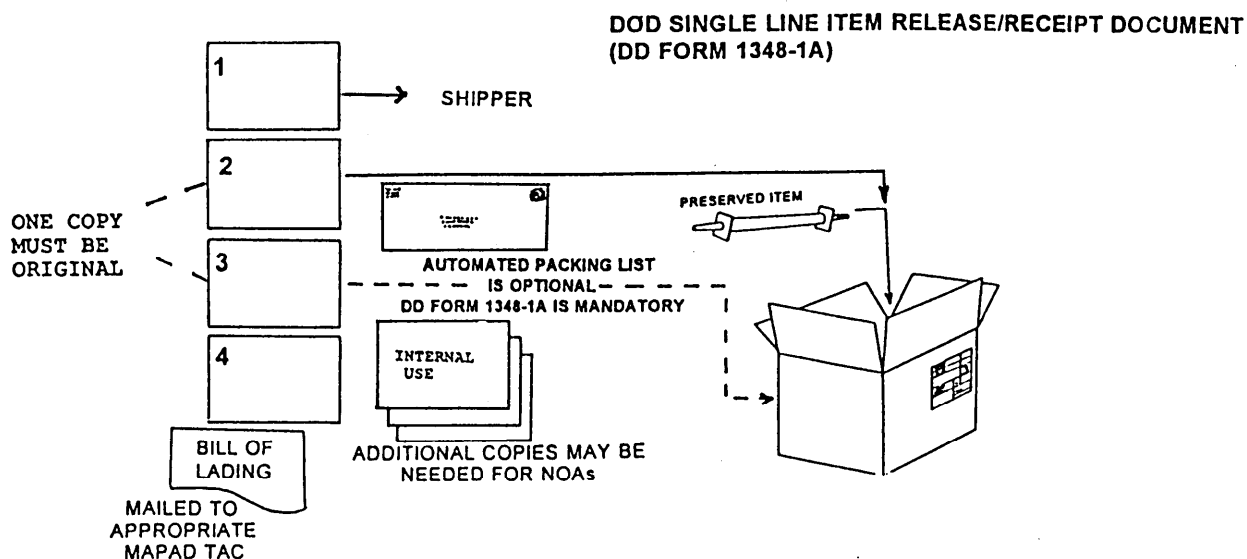


FIGURE 3. Distribution of the DD Form 1348-1A.

5.1.1.4 Lithographing, embossing, roller coating, or stamping. When lithographing, embossing, or roller coating of markings is authorized, commercial enamels, lacquers, or inks in the color specified shall be used. When stamping is specified, commercial waterproof and petroleum-resistant inks, in the color specified, must offer sufficient durability on exposure to field service.

5.1.2 Labels, paper, pressure-sensitive, water-resistant. Labels shall be of a water-resistant grade of paper, film, fabric, or plastic, coated on one side with water-insoluble, permanent type adhesive. The adhesive shall adhere to metal,

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withstanding normal handling and storage conditions, and shall remain securely in position.

5.1.2.1 Protective coating of labels . If labels for exterior containers, except vehicles and related items, are not inherently waterproof, they shall be waterproofed by coating the entire outer surface of the label with a transparent, waterproofing material (see 5.1.1.1).

5.1.3 Tags . A metal, cloth, plastic, paper, or other suitable durable material shipping tag, bearing the required markings, shall be used when specified herein or when it is impractical to stencil mark or apply a label on the container or unpacked item.

5.1.4 Water-resistant envelopes . Water-resistant envelopes shall be used for packing lists and materiel release/receipt documents. Securely affix or fasten the envelope to the package or container.

5.1.5 Conditions of surfaces to be marked . All surfaces to be marked shall be in a condition so that markings remain permanent, legible, and nonfading. All marks not applicable to the shipment shall be obliterated. When shipping containers are consolidated into container vans for shipment to an ultimate consignee, obliteration of current address markings is not required. When original unopened packs are readdressed for shipment by a DoD shipping element, contract data markings shall not be obliterated unless they interfere with other required markings.

5.1.6 Legibility and durability of markings . Markings shall be applied by any means that provides clear, legible, durable, and nonfading markings sufficient to withstand normal exposure to environments and handling to which the package/container might be subjected.

5.1.7 Methods of marking unit packs, intermediate and exterior containers, and loose or unpacked items . Markings shall be accomplished by any means that provides the required degree of legibility and durability. Although machine printing is preferred, hand printing may be used on packs and containers for marking as permitted by the cognizant activity. Hand printing and labels are not authorized for ammunition.

5.1.7.1 Labels .

5.1.7.1.1 Use of labels . Pressure-sensitive labels that meet

the requirements of 5.1.2 may be used on containers other than wood. Pressure-sensitive labels may be used on wood containers after the labeling area has been suitably prepared to ensure adhesion.

5.1.7.1.2 Affixing and securing paper labels (except for labels on vehicles and related equipment) . Paper labels that are other than pressure-sensitive shall be securely affixed with a water-resistant label adhesive or a transparent, waterproof, pressure-sensitive tape.

5.1.8 Marking board or marking pane 1. Marking boards and marking panels shall be constructed of a durable weather-resistant material.

5.1.9 Size of markings . Unless otherwise specified herein, the lettering for all markings on all sizes of containers shall be in capital letters of equal height, shall be clearly legible, and shall be proportionate to the available marking space.

5.2 Special markings . The special markings discussed in this standard are examples of the types of special markings that may be specified in a procurement document. Every procurement document must include all special marking requirements applicable to the contract. Unless otherwise specified, the special markings shall be placed in a conspicuous location on the identification-marked side of the applicable container or item.

5.2.1 Shelf-life markings (see figure 4) . When shelf-life markings are required, they shall be shown below the item identification data on unit packs, intermediate containers, exterior containers, and unpacked items. Shelf-life markings shall include the manufactured, cured, assembled or packed date (apply one date), and the expiration or inspect/test date, as appropriate. Guidance on shelf-life markings can be found in MIL-HDBK-129.

5.2.2 Project code markings (see figure 4) . When required, project code labels shall be applied to exterior containers. The project code shown in the requisition or procurement document (e.g., ARI, ABC, etc.), shall appear in the address and also on a white label having a black bordered disc superimposed on it. If more than one project is required, all project codes may be put on one label. Label sizes shall be 3 by 3 inches with a 2-inch diameter disc or 9 by 9 inches with a 6-inch diameter disc, with both having proportionate black lettering. The project code may also be applied directly on a container. When markings are

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applied by tags, the project code shall be placed on the identification tag adjacent to the identification markings. The project code markings shall be applied as follows:

- a. Rectangular containers, consolidation containers, and palletized loads - two discs, one on each side.
- b. Cylindrical containers - two discs equally spaced on the circumference.
- c. Irregularly shaped containers and loose or unpacked items - stenciled or printed on identification-marked side of a tag.
- d. Vehicles or other major unpacked items - one disc on the marking board, or one disc applied directly on a vehicle by a waterproof, pressure-sensitive tape such as ASTM D 5486. The tape shall be placed over the label and extend a minimum half inch from all edges of the label.
- e. Postal - one disc adjacent to the address marking.
- f. MILVANS/SEAVANS - not marked. However, containers or items comprising the load shall be marked.

5.2.3 Transportation special handling/protective services (see figure 4). Shipments moving by military controlled aircraft (including military contract airlift) requiring special handling/protective services shall have a DD Form 1387-2 (Special Handling Data/Certification) label affixed to the exterior container. The form shall be prepared as specified in DoD 4500.32-R for non-hazardous, classified/protected materiel. It shall be placed on the same side of the container as the address marking. Non-hazardous materials moving by military controlled aircraft such as items subject to damage by heat or freezing and life or death shipments also require a completed DD Form 1387-2.

5.2.4 Structural markings. When required, structural markings such as "REMOVE TOP FIRST" or "TO OPEN TOP: REMOVE SCREWS," shall be placed on shipping containers on or near the structure described. Containers designated as "reusable" shall include sufficient structural markings to provide instructions for opening and unpacking without causing damage to the container, packing materials, and the container's contents.

5.2.5 Valuable and security items. When items such as certain drugs, narcotics, precious metals, currency, jewelry, cameras, and similar type valuables are shipped, markings shall be as specified by the cognizant activity concerned or as required by regulation or statute. When no marking requirements are specified, marking shall be as prescribed in 4.2.1 and 4.2.2.

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5.2.6 Special handling, including arrows and FRAGILE/DELICATE markings. All containers will have appropriate caution markings applied. Special handling markings such as TOP, UP, THIS SIDE UP, GLASS, KEEP DRY, PERISHABLE, KEEP FROZEN, or FRAGILE or DELICATE shall be placed on shipping containers, as applicable. These markings shall not interfere with or obscure other markings. Special handling illustrations are contained in ASTM D 5445 and MIL-HDBK-129.

5.2.7 Warranty markings. When an item is procured with a warranty agreement, warranty markings shall be applied to all containers. Warranty markings are illustrated in MIL-HDBK-129.

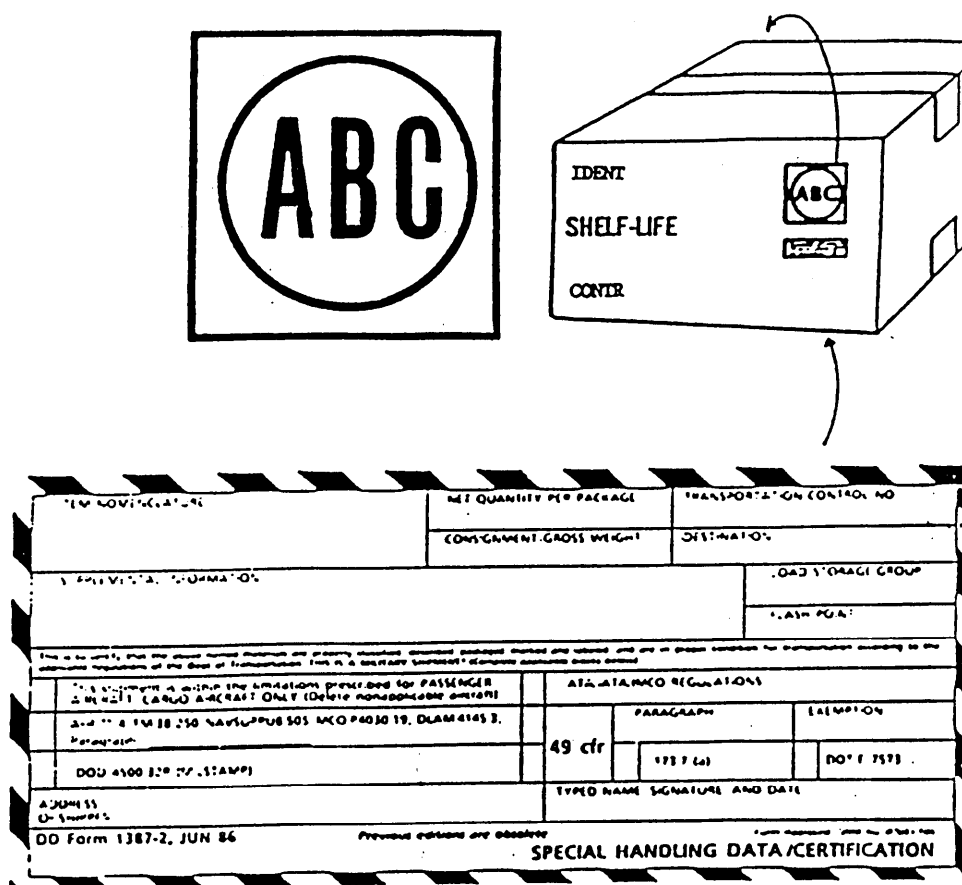


FIGURE 4. Examples of special markings (shelf-life, project code, and transportation special handling/protective services markings).

5.2.8 Method 50 (formerly Method II) marking (MIL-STD-2073-1C) (see figure 5). Desiccated packs shall bear a cautionary marking on the identification-marked side to alert personnel that the item is preserved with desiccant and should not be opened prior to use. On unit packs and intermediate containers, cautionary markings may be applied by any means that provides a high degree of visibility and permanence. On exterior containers, these markings may be applied by any means that provides the required degree of legibility and durability. Preprinted labels (OF 73 or OF 74) are available. When cautionary marking is applied directly on the container, red marking ink that is waterproof, bleed-resistant, and resistant to ultraviolet ray degradation shall be used (see 6.6). When space is not available to permit the use of a label, the words "DESICCATED PACKAGE - DO NOT OPEN UNTIL READY FOR USE" shall be placed on the container adjacent to the identification markings.

NOTE: The OF 73 and OF 74 Method II labels shall be used until all stocks are exhausted, or until December 1997, whichever occurs first. The new Method 50 labels discussed herein shall have the same OF numbers and NSNs as the two current OFs.

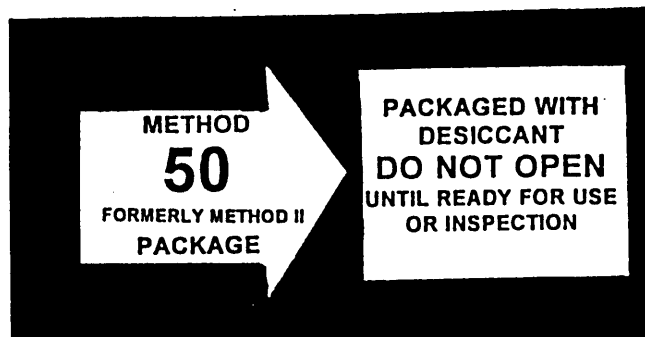


FIGURE 5. Method 50 marking.

5.2.9 Magnetized materials suitable for shipment via aircraft. Containers and/or bare items that contain magnetized material which has been determined suitable for shipment by military aircraft will be marked and labeled per AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3. Commercial air shipments shall be marked and labeled in conformance with ICAO and IATA regulations. Magnetized material that has a magnetic field strength greater than 0.00525 gauss at 4.6m (15 feet) is forbidden for air movement.

5.2.10 Engineering or technical order changes or modifications (see figure 6). Containers of materiel that are furnished for a Modification Work Order (MWO) shall be marked with the MWO number preceded by the letters "MWO." The marking shall be located in the lower right-hand corner of the identification-marked side of the container.

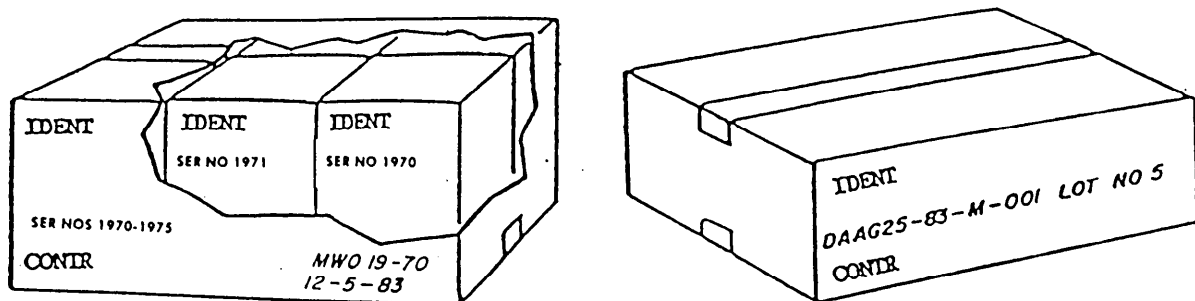


FIGURE 6. Examples of special markings (Modification Work Order (MWO), serial and lot number markings on unit packs and intermediate and exterior containers).

5.2.11 Serial number (see figure 6). An item assigned a serial number shall have that number applied to the unit pack and to the intermediate and exterior containers preceded by the abbreviation "SER NO" The number shall be shown directly below the identification marking and above the contract data marking except when the item is packed in accordance with 5.2.13.1. When unit packs bearing consecutive serial numbers are packed in an intermediate or exterior container, only the first and last number in the series, separated by a dash, shall be shown. When not in sequence, each serial number shall be listed on the container. When there is inadequate space on the container for the marking of multiple sequences of serial numbers, one copy of the serial number list shall be placed inside the container and one copy shall be placed in the packing list envelope. The identification-marked side of the container shall be marked "SERIAL NUMBER LIST INSIDE." Serial numbers assigned by the manufacturer solely for indicating the quantity produced shall not be shown.

5.2.12 Lot, batch, or identification control numbers (see figure 6). Lot, batch, or identification control numbers on unit packs and intermediate and exterior containers shall be preceded by the proper designation, e.g., LOT NO 5, and shall be shown adjacent to the contract number.

5.2.13 Set or assembly markings (see figure 7). When a set or assembly is placed in two or more containers, each container shall be marked with its own number within the set (i.e., 1 of 2), the total number of containers making up the set (i.e., 2 of 2), and the number of the set within each shipment (i.e., Set 1). Set or assembly markings shall be placed in the lower right-hand corner of the identification-marked side of the container as shown. A 2-inch disc of a high contrast color shall be placed above the numbers on each container.

5.2.13.1 Set or assembly (component parts of disassembled items with or without serial numbers) (see figure 7). All component parts of disassembled items shall have the serial number of the item placed on each shipping container comprising the applicable set. The serial number of the item shall be shown immediately below the fractional number which identifies the individual container and the total number of containers comprising the set. When an item which does not have a serial number is disassembled for shipment, a date (month, day, and year) followed by a capital letter to identify a set or assembly shall be shown on the shipping container in lieu of a serial number. Each set shall bear a different letter. Double letters may be used, when appropriate.

5.2.13.2 Single stock-numbered and part-numbered sets (see figure 7). When the components of a single stock-numbered or part-numbered item are packed in two or more shipping containers or are stored together as a set, the stock number or part number shown on each shipping container shall be that of the complete set and shall be prefixed with "P/O" (part of). The component shall be shown directly under the set NSN. Additional information on set or assembly markings are contained in MIL-HDBK-129.

5.2.14 Consolidation containers. Consolidation containers that are shipped to a single destination but contain individual shipments/containers for multiple consignees (multiple DoD activity address codes) shall have the words "MULTIPLE DoDAACS" applied to the outside of the container below the identification markings. This requirement applies to "kits" only if they are individual shipments that are consolidated into one container and

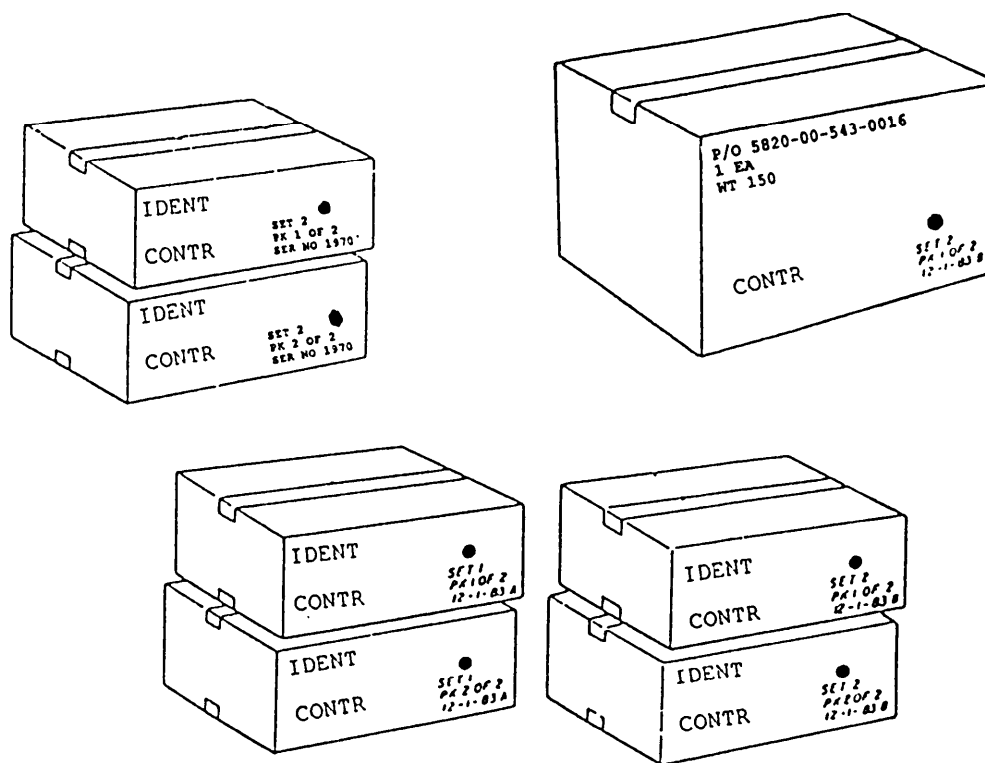


FIGURE 7. Examples of special markings (set or assembly markings, with component parts of disassembled items having serial numbers and with those not having serial numbers, and singled stock-numbered and part-numbered set markings).

5.2.15 Expedited handling - not mission capable supply (NMCS) and 999 (see figure 8). Requisitions and contracts identified as NMCS shipments shall have an NMCS code shown in the RDD block of the address label. The applicable code is 999 or the letter "N," which may be followed by the RDD expressed in the number of days from the date of requisition. NMCS condition 999 shipments shall be marked with two 999 labels, with one 999 label placed adjacent to the address markings and one placed on the opposite side of the container. For NMCS conditions other than 999, one NMCS label shall be placed adjacent to the address markings and one shall be placed on the opposite side of the container.

5.2.16 Center of balance and lifting and tiedown points (see figure 9). When the weight of an item is not evenly distributed, a 1-inch wide vertical line not less than 3 inches long locating

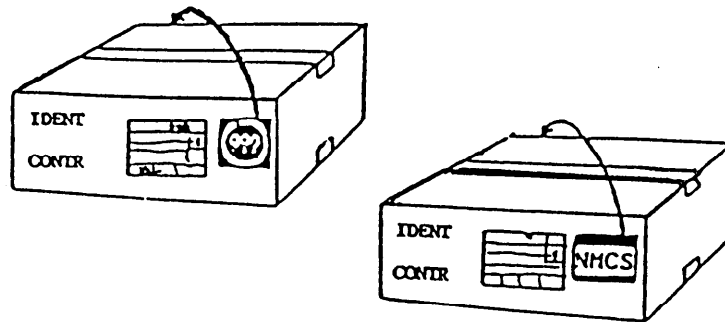


FIGURE 8. Examples of expedited handling labels.

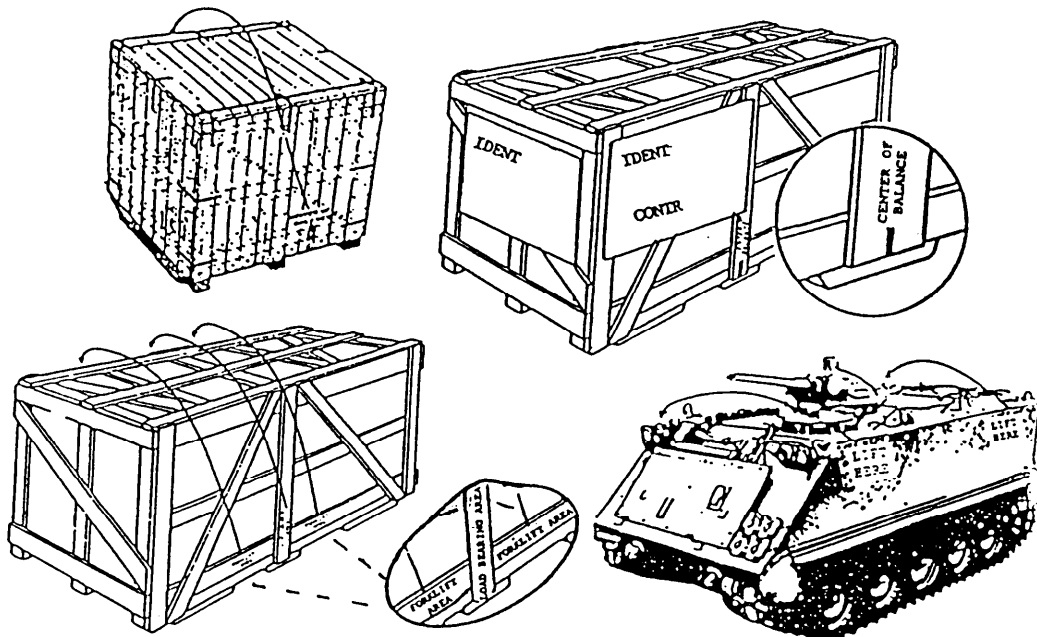


FIGURE 9. Center of balance, load bearing area, and lifting and tiedown points.

the center of balance shall be extended up from the bottom edge of both sides of the item or its container, regardless of its length. The words "CENTER OF BALANCE" shall be clearly marked by any means that provides the required degree of legibility and durability in 1-inch letters above or alongside the line. On unboxed equipment and vehicles, the identification of lifting or

tiedown provisions used for transport shall be stenciled in locations on the exterior of the equipment in letters not less than 1 inch in height. Accessories resembling provisions for lifting or tiedown shall be located or designed to avoid mistaken use as unacceptable for lifting or tiedown. Additional guidance on structural markings, including lifting and tiedown points, load bearing areas, and axle weight markings are contained in MIL-HDBK-129.

5.2.17 Electrostatic discharge (ESD) sensitive devices (see figure 10). All unit packs and intermediate and exterior containers of ESD sensitive devices (or other electronic items that are alone or are part of assemblies) that are susceptible to damage from ESD shall be marked as specified herein.

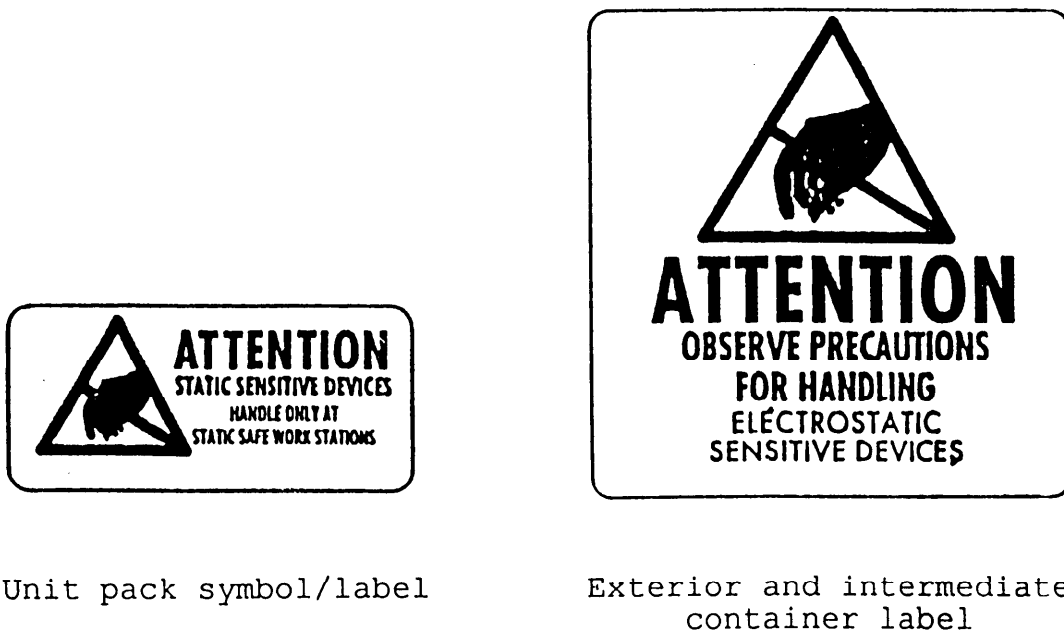


FIGURE 10. ESD sensitive devices attention symbols and labels.

5.2.17.1 Unit packs. All unit packs shall be marked with the ESD sensitive devices attention label prescribed by ASTM D 5445. The label shall include the ESD sensitive device symbol (triangle and reaching hand), the words "ATTENTION STATIC SENSITIVE

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DEVICES," and the statement "HANDLE ONLY AT STATIC SAFE WORK STATIONS." The symbol and lettering on the label shall be marked in black on a yellow background. Unit packs that are not overpacked and are used as exterior containers shall be marked with the unit pack label.

5.2.17.2 Intermediate and exterior containers . Intermediate and exterior containers shall be marked with the ESD sensitive devices attention label. The ESD sensitive devices symbol and the words "ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES" shall be marked in black on a yellow background. One 2- by 2-inch label shall be placed on the identification-marked side of an intermediate container. Two 4- by 4-inch labels shall be placed on each exterior container that exceeds one-half cubic foot. One label shall be placed on the identification-marked side (or surface), and one label shall be placed on the opposite side (or surface). Smaller exterior containers shall be marked in the same manner except that the 2- by 2-inch label may be used in lieu of the larger label. If the label is temporarily unavailable, intermediate and exterior containers shall be marked with the ESD sensitive devices symbol and the information printed on the label in figure 11. The minimum size of the symbol shall be five-eighths of an inch measured vertically at the base of the triangle. When preprinted labels are not used, the symbol shall be printed in black or the same color as the identification markings, if other than black.

5.3 Exterior container documentation (packing lists, DD Forms 250, DD Forms 1155, DD Forms 1348-1A, etc.) .

5.3.1 Packing lists . Sets, kits, or assemblies composed of unlike items but identified by a single stock number or part number, shall have a packing list identifying each item securely attached to the end or side of the container. Sets with two or more exterior shipping containers of different stock numbered or part-numbered items require a master packing list. One copy shall be attached to container No. 1 and one copy placed inside container No. 1. The contents of packages containing installation or assembly hardware such as brackets, connectors, nuts, bolts, and washers shall be listed in detail on the packing list. "Kit contents lists" shall be placed inside the "kit container" and shall not be included with the packing list on the outside of the exterior container. An additional packing list placed inside each container is recommended. For information on exceptions to the use of exterior container documentation, see 5.3.3. Automated packing lists (APL) shall contain the minimum data listed in DoD 4000.25-1-M.

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5.3.1.1 DD Form 250 (Material Inspection and Receiving Report). A DD Form 250 shall be used as a packing list for contractor shipments and shall be applied to each exterior container, when applicable, in accordance with 5.3.2.1 through 5.3.3. Copies of packing lists shall be in addition to those required for standard distribution as specified in the DFAR Supplement, and each shall be marked "Packing List."

5.3.1.2 DD Form 1155 (Order for Supplies or Services/Request for Quotation). A DD Form 1155 shall be attached to a vendor's commercial packing list and applied to applicable exterior containers.

5.3.1.3 Application of packing lists. Exterior packing lists shall be sealed in water-resistant envelopes and secured to the exterior of the palletized load or container in the most protected location. An illustration on placement of a packing list is in MIL-HDBK-129.

5.3.2 DD Form 1348-1/DD Form 1348-1A and APLs.

5.3.2.1 Shipment units of single-line items. For single-line item shipments, one legible copy of the DD Form 1348-1/DD Form 1348-1A shall be attached to the materiel in shipping container No. 1. In addition, at least one legible copy of the applicable form shall be enclosed in a water-resistant envelope attached to the outside of the shipping container. When the storage container is used as the shipping container, the copy normally placed inside the container shall be enclosed with the copy attached to container No. 1. It should be noted that the DD Form 1348-1 will be cancelled in January 1998.

5.3.2.2 Shipment units of multiple-line items. For multiple-line item shipments, one copy of the DD Form 1348-1/DD Form 1348-1A shall be placed in a water-resistant envelope so that the NSN is visible. The envelope shall be attached to the package applicable to each requisition. When a polyethylene bag is used to group single items for packing, the same bag shall contain a DD Form 1348-1/DD Form 1348-1A folded so that the identification and requisition information are visible. At least one copy of the form, applicable to each requisition, shall also be placed in a water-resistant envelope attached to the exterior of each multipack container.

5.3.2.3 Methods of attaching documentation to fiberboard boxes. DD Forms 1348-1/DD Forms 1348-1A and APLs shall be attached to fiberboard boxes in the following manner. Prior to

sealing the fiberboard box, place the appropriate papers in a water-resistant envelope. Then place the envelope under the flaps of the box so that the open end/flap of the envelope extends down the end of the box under the closure tape. Place the words "PAPERS HERE" on the tape in letters at least half an inch high directly over the envelope containing the papers. This is not authorized for FMS shipments, except for those sent by registered mail. When shrink or stretch film is used to consolidate multiple items, one copy of the DD Form 1348-1/DD Form 1348-1A shall be attached to the materiel. For single items, two copies of the applicable form shall be placed under the shrink film in such a manner as to be read. This method is not authorized for FMS shipments.

5.3.2.4 Method of attaching accompanying documentation for shipments of vehicles. A minimum of two copies of the DD Form 1348-1/DD Form 1348-1A or DD Form 250 shall be provided and shall be securely attached in or on the vehicle as follows:

- a. Interior. Place one copy of the shipping document and one copy of the preservation/depreservation guide inside a sealed bag or water-resistant envelope. Attach the bag or envelope to a conspicuous location inside the vehicle.
- b. Exterior. Place the remaining copy of the shipping document and preservation/depreservation guide, unit packed as specified above, on the vehicle adjacent to the shipping address and securely attach the bag or envelope.

5.3.3 Exceptions to the use of exterior container documentation, such as packing lists, DD Forms 250, DD Forms 1155, and DD Forms 1348-1/DD Forms 1348-1A (see figure 11). With the following exceptions, exterior container documentation is required on all contractor and DoD shipments.

- a. No exterior documentation is required for containers of like items or single-item packs when the contents are listed on a label attached to the boxes, lithographed or printed on the boxes, or when a manufacturer's part list is provided. For FMS shipments, exterior container documentation is always required.
- b. For controlled, sensitive, classified, and pilferable items (except for FMS shipments), the shipping documentation shall be placed inside all containers rather than on the outside. For classified shipments, markings which indicate the classified nature of the materiel and its security classification, if it will identify the classified

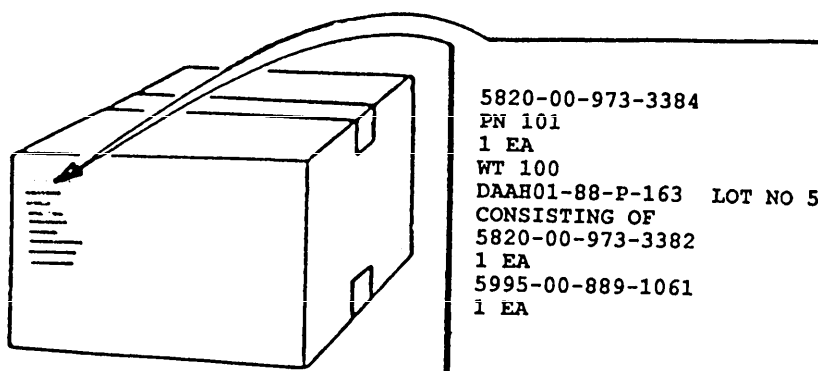


FIGURE 11. Single stock numbered item consisting of other stock numbered items in a single container.

5.4 Hazardous materials (HAZMAT). The marking and labeling requirements for shipment and storage of HAZMAT, including ammunition and hazardous wastes, shall be accomplished as stated herein and in the applicable regulatory documents. Additional guidance can be found in MIL-HDBK-129.

5.4.1 HAZMAT marking and labeling requirements. Depending on the mode of transportation, HAZMAT shall be marked and labeled in accordance with Title 49 CFR, ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air, IATA Dangerous Goods Regulations, the IMO IMDG Code for water shipments, and AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 for military air shipments, as applicable. Proper shipping names (PSNs), HAZMAT North American (NA) or United Nations (UN) identification numbers, IATA/ICAO temporary identification (ID) numbers, DOT assigned EX numbers (for ammunition items with no assigned NSN/DoDIC), HAZMAT classification warning labels, and HAZMAT UN standard container certification markings shall be placed on the exterior container, as required (see figure 13). Government-owned dangerous goods that were packaged, marked and labeled prior to 1 January 1990 and destined for surface shipment or military air shipment need not be remarked. The shipper is also responsible for completing a prescribed declaration form for every military air shipment containing dangerous goods, including hazardous materials. See Joint Service Regulation AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 for instructions on how to properly complete the form.

5.4.2 Marking and labeling of multipacks containing HAZMAT .
When a multipack contains HAZMAT, PSNs with applicable ID numbers, and NA or UN identification numbers, shall be marked on each applicable container in the multipack. They shall also be listed on the identification-marked side of the multipack. Applicable HAZMAT classification warning labels for each class of material contained in the multipack shall also be applied on the outside surface.

5.4.3 Marking and labeling of air and water shipments .
Marking and labeling requirements for shipments of HAZMAT by domestic commercial air are specified in Title 49 CFR and by international air in the ICAO technical instructions and the IATA Dangerous Goods regulations. When shipment is by military airlift or contract carrier, the requirements of AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 shall apply. In addition, for all military air shipments, the outer container of combination packages, having inner receptacles that contain a liquid HAZMAT, must also be marked "AIR ELIGIBLE" to verify that either the inner container(s) or the outer container meet the internal pressure requirements for air eligibility. This required marking is in addition to any applicable UN-recommended packaging certification markings. The marking and labeling requirements for the shipment of HAZMAT by vessel are specified in Title 49 CFR and in the IMO IMDG Code. The IMO IMDG Code is used for overseas shipments by vessel.

5.4.4 Identifying containers and packagings (see figure 12) .
Containers or configurations (packagings) shall be identified as complying with containers identified in DOT regulations, or Federal or military specifications. When a container that is manufactured to a Government approved drawing, or specification has successfully passed all applicable UN-recommended performance tests, both the UN packaging certification marking (see paragraph 5.4.4.1) and applicable Government approved drawing or container specification marking shall be applied.

5.4.4.1 DOT specification and UN standard packagings (see figure 12) . When the container complies with a DOT specification, or UN standard, the container must be marked as required by the applicable specification (see Part 178 of Title 49 CFR). This is normally the responsibility of the container manufacturer. When required, these UN standard markings shall be placed on the opposite side of the shipping container from the side containing the identification markings. The UN symbol and the size of the lettering shall also conform to the requirements of Part 178 of Title 49 CFR.

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certify the packagings themselves as meeting the UN performance requirements or must have the packagings certified by a DOT-approved testing facility. The contractor is also responsible for determining the use of the registered symbol of the contractor, packaging manufacturer, or the DOT-approved testing facility as part of the UN packaging certification markings.

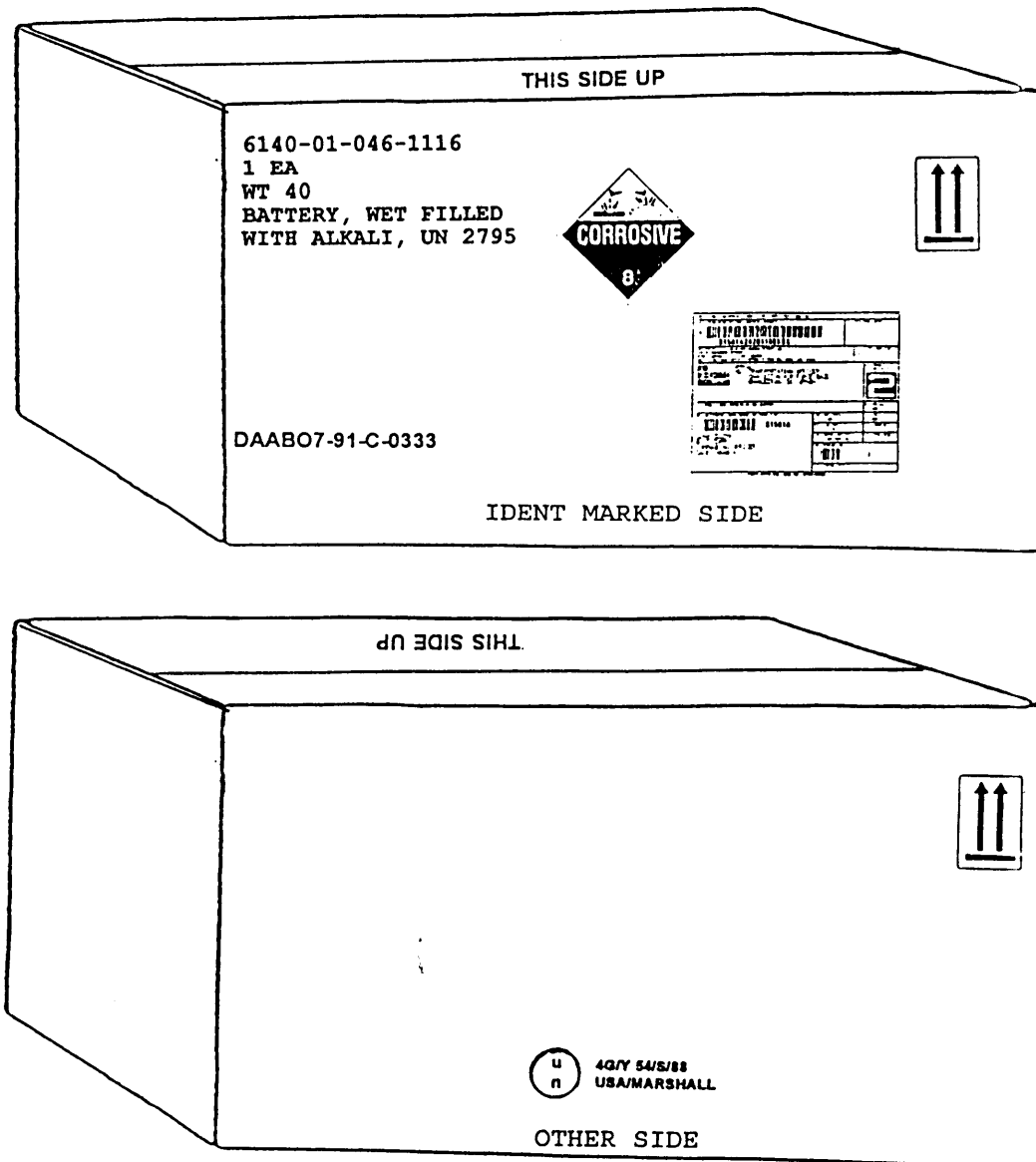


FIGURE 12. An example of exterior container HAZMAT marking and labeling requirements.

5.4.4.2 Specialized containers (see figure 12). When a container is manufactured to a Government-approved drawing or specification, it shall be identified as such. When the complete package, including cushioning and blocking materials, inner container(s), and the shipping container, is covered by a detailed procedure in a specification or Government approved drawing, the applicable specification or packaging drawing shall be marked on the container in an inconspicuous location, such as the bottom of the container. This additional marking need not be applied to containers with name-plates when the contents are specific to the container (e.g., an MK 46 Torpedo in an MK 535 container) or to packages when the entire packaged configuration is described by the NSN which is also part of the identification markings. These type containers may be used to ship HAZMAT domestically and internationally when covered by a Competent Authority Approval (CAA) or the packaging has successfully passed all applicable UN-recommended performance tests and is so marked.

5.4.4.3 Certification of Equivalency (COE). When a COE has been issued, the container certification number shall be applied near the PSN and any other cautionary markings. COEs shall not apply to international shipments.

5.4.4.4 Competent Authority Approval (CAA). The competent authority, which is DOT, may grant permission to use a package without POP testing it. If required by the CAA, the approval number must appear on the package in association with the PSN and ID number. All requests for CAAs shall be documented as specified in Title 49 CFR and Joint Regulation DLAD 4145.41/AR 700-143/AFJI 24-201/NAVSUPINST 4030.55A/MCO 4030.40A.

5.4.5 Flash point marking (see figure 13). All unit packs, intermediate containers, and exterior shipping containers packed with flammable liquids (flash point of not more than 141 degrees Fahrenheit (F) or 60.5 degrees Celsius (C)) shall be marked with the flash point of the material in degrees F only.

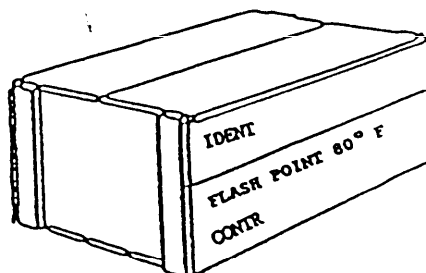


FIGURE 13. Flash point markings.

5.4.6 Specific hazards.

5.4.6.1 Asbestos (see figure 14). Containers of asbestos and products containing asbestos which may be expected to produce dust in excess of the Occupational Safety and Health Administration's (OSHA) exposure limits during handling, processing, storage, disposal, or transportation shall be marked with a warning label, as specified in OSHA's Title 29 CFR.

5.4.6.2 Polychlorinated biphenyls (PCBs) (see figure 14). As required by the Environmental Protection Agency (see Title 40 CFR), unit packs and intermediate containers, including containers that serve as shipping containers of waste PCB, shall have a PCB label affixed to them.

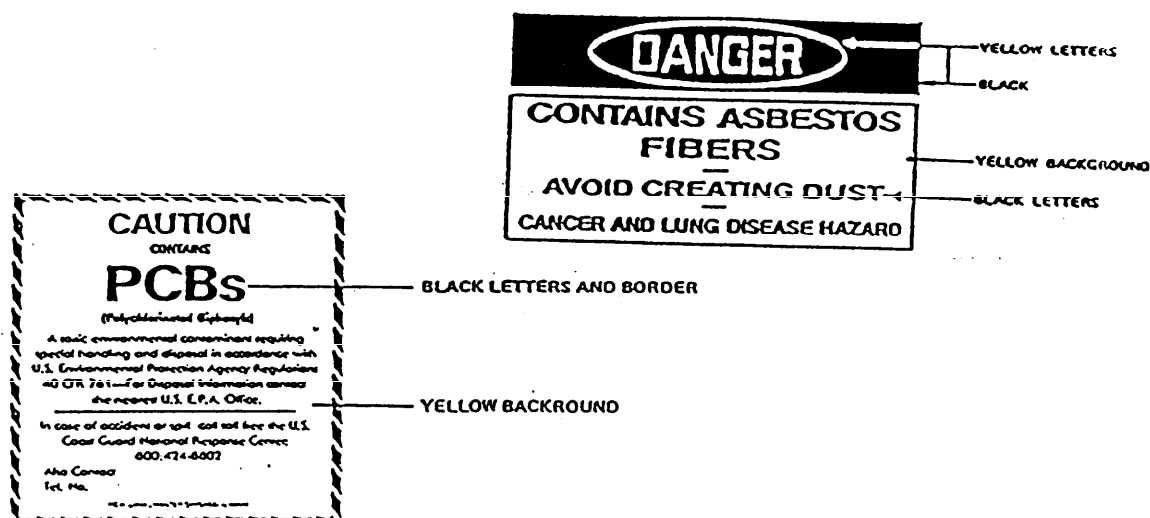


FIGURE 14. Asbestos and PCB HAZMAT labels.

5.4.7 Hazardous chemical warning label. Hazardous materials shall require a chemical warning label as specified in 29 CFR 1910.1200, Hazard Communication Standard. When the manufacturer's warning label has been removed or obliterated, or if the product is poured from one container into another, the DoD standard hazard warning label (DD Form 2521 or DD Form 2522 (smaller version)) shall be applied to the unit container. The warning labels are available in the CD-ROM version of the Hazardous Materials Information System (HMIS). If a container

includes more than one unit pack, such as a container of six aerosol cans that have a unit issue of "one each", then the warning label should not be applied to the individual unit packs (each aerosol can) that comprise the container until the container itself is opened.

5.4.8 Kits containing HAZMAT . Kits that contain hazardous components in small quantities such as adhesives, solvents, inks, paints, and other flammable liquids, or chemical kits as defined by Title 49 CFR, shall be marked and labeled in accordance with the requirements of Title 49 CFR and the applicable international document (e.g., ICAO, IMO, etc.).

5.4.9 Radioactive material marking and labeling requirements . Containers of radioactive materials prepared for shipment shall be marked and labeled in accordance with applicable sections of Title 49 CFR and the applicable international document (e.g., ICAO Technical Instructions, IMDG Code, etc.).

5.4.9.1 Nuclear Regulatory Commission (NRC) interior/storage container label (see figure 15) . Containers of radioactive materials in storage shall be labeled in accordance with Title 10 CFR (see paragraph 5.4.8.4 for exceptions). When a container of radioactive material that has the NRC label affixed to it is used as the outermost container during shipment and is packaged and labeled as specified in Title 49 CFR, the NRC label shall be removed prior to shipment to preclude any confusion for personnel transporting or receiving the container. Once the container is received, the proper NRC label must again be affixed to it. Exceptions to the use of the NRC interior/storage container label are contained in 5.4.8.4. These interior/storage container labels may be either locally produced or procured. However, they must contain all the information required for each radioactive material.

5.4.9.2 Radioactive materials requiring an NRC label . Any commodity or item containing radioactive material in excess of the amounts shown in Title 10 CFR, part 20, appendix C, require an NRC label. Radionuclides other than those listed in Title 10 CFR or mixtures of beta emitters of unknown composition also require an NRC label.

5.4.9.3 Transportation of radioactive materials . Shipping containers of radioactive material shall be marked and labeled as specified in Title 49 CFR for domestic shipments, applicable international documents such as the ICAO or IMO for international shipments, or the AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3 for military air shipments.

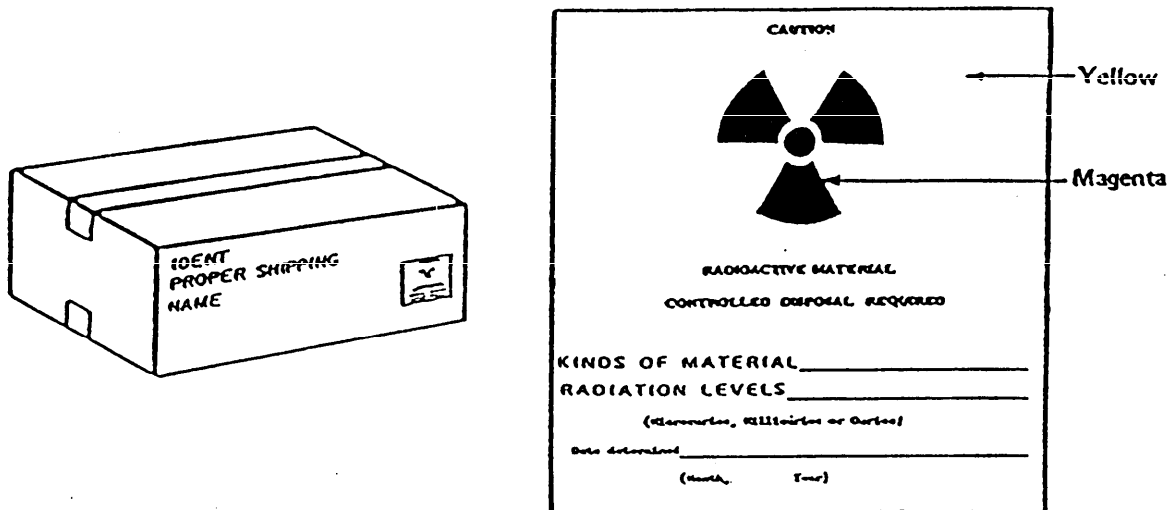


FIGURE 15. NRC interior/storage container label.

5.4.9.4 Exceptions to the use of radioactive material labels. When determining the appropriate radioactive material labels to be applied to containers in storage and to those being prepared for shipment, the following exception data must be considered. The NRC interior/storage container label is not required for limited quantities of radioactive materials and devices and low specific activity radioactive devices specified in Title 49 CFR, part 173; for materials that are processed in accordance with the general license provision of Title 10 CFR, parts 31 and 40; when exempted by the provisions of Title 10 CFR; when alternate markings are authorized by the NRC in a specific license; or when materials are otherwise exempted by Federal regulations. Any outer package that contains radioactive material need not be labeled in accordance with the provisions in Title 10 CFR, part 20, if the package is in transport or is ready for transport, and the packaging/labeling/markings is in accordance with the DOT regulations (i.e., Title 49 CFR, part 173). Radioactive hazardous warning labels are not required for manufacturing or processing equipment such as nuclear reactors, their components, piping, and tanks or when packages are exempt from DOT labeling under Title 49 CFR, 173.421, 173.422, 173.424, or 173.425; when specific exemptions are granted by DOT; and as specified in AFJMAN 24-204/TM 38-250/NAVSUP PUB 505/MCO P4030.19/DLAM 4145.3.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.

6.1 Intended use . This standard practice is intended for use when guidance is required for the application of military markings as prescribed herein or in contractual documents. The markings shown herein may be applied either by vendors or by Government activities.

6.2 Subject term (key word) listing .

- Address
- Bags
- Boxes
- Crates
- Drums
- Exterior container
- Federal Supply Class
- Identification
- Intermediate container
- Labels
- National Stock Number
- Marking
- MILVAN
- Sacks
- SEAVAN
- Shipping
- Tags
- Unit pack

6.3 International interest . Certain provisions of this standard are the subject of international standardization agreements STANAG 4281, STANAG 4329, QSTAG 1152, and QSTAG 1154. When change notice, revision, or cancellation of this standard is proposed which will modify the international agreement concerned, the preparing activity will take appropriate action through international standardization channels, including departmental standardization offices, to change the agreement or make other appropriate accommodations.

6.4 Changes from previous issue . Marginal notations are not used in this revision to identify changes with respect to the previous issue date due to the extent of the changes.

6.5 Sizes of forms used . Descriptions of certain forms cited

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for use by this standard contain specific size requirements. These forms are generally intended to be imprinted with data by computers or generated entirely by computers. The sizes listed are those that are compatible with the majority of printers associated with computer systems commonly used.

6.6 Desiccated unit pack label (MIL-STD-2073-1C). The label or package marking described in 5.2.8 is used to identify packages containing desiccant, a drying agent that is intended to alert personnel that the package should remain unopened to prevent the degradation of preservation of the item. Items packaged with desiccant must be completely reprocessed with new desiccant after opening. The color red is used to make this marking stand out from other markings, which are usually black.

6.7 Project code disc. The project code disc described in 5.2.2 is used to earmark materiel for a specific purpose. In instances when containers are required to be marked with the legend "999", the background must be white and the disc red, with white numerals. This is a requirement of the Joint Chiefs of Staff and is used only when specifically authorized by the JCS.

6.8 Chemical agent resistant coatings (CARC). Certain military equipment is required to be painted with material that resists contamination by certain chemical agents that may be used by the enemy in wartime situations. Since no commercial equivalents are available for these compounds, and since there is no commercial need for such protection, use of specific military materials, to include adhesives and other items, is required.

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CONCLUDING MATERIAL

Custodians:

Army - SM
Navy - SA
Air Force - 69
DLA - DH

Preparing activity:

Army - SM

(Project PACK-1033)

Review activities:

Army - AL, AM, AR, AT, AV, CR3, EA, GL3, CR4, MI, MR, MT
Navy - AS, CG, EC, MC, MS, OS, SH, TD, YD1
Air Force - 11, 13, 16, 70, 71, 80, 82, 84, 99
DLA - CS, CT, DM, GS, IS, PS, SS

Civil Agency Coordinating Activity:

GSA - FCOE

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.
NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER

MIL-STD-129N

2. DOCUMENT DATE (YYMMDD)

970515

3. DOCUMENT TITLE

STANDARD PRACTICE FOR MILITARY MARKING

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE
(Include Area Code)

(1) Commercial:

(2) DSN:
(If Applicable)

7. DATE SUBMITTED
(YYMMDD)

8. PREPARING ACTIVITY

a. NAME

Chief
LOGSA PSCC

b. TELEPHONE NUMBER (Include Area Code)

(1) Commercial

(2) DSN

(717) 895-7649

795-7649

c. ADDRESS (Include Zip Code)

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